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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,649	09/10/2001	Harald Eggers	112740-253	8638

29177 7590 08/11/2004
BELL, BOYD & LLOYD, LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER

KLINGER, SCOTT M

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/889,649	Applicant(s) EGGERS ET AL.	
	Examiner Scott M. Klinger	Art Unit 2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 19 July 2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Preliminary amendment with a filing date of 14 January 2000 has been entered.

Claims 1-16 have been canceled.

Claims 17-32 are pending.

Priority

A claim for foreign priority has been made. The effective filing date for subject matter in the application is 19 January 1999.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 17 and 25, the phrase “*and, if appropriate*” renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 17, the phrase “*with good probability*” renders the claim indefinite because it is unclear what is meant by “*good probability*.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 18, 25, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett (U.S. Patent Number 4,530,091, hereinafter "Crockett") in view of Hashimoto (U.S. Patent Number 6,223,286, hereinafter "Hashimoto").

In referring to claims 17 and 25, Crockett shows substantial features of the claimed invention, including:

- Transmitting, via the at least one main computer, with an N-th interrupt of a sequence of interrupts which are transmitted at a fixed time interval, a synchronization message with a time indication, the time indication corresponding to a time of day of the main computer at an instant of the N-th intercept plus the fixed time interval:
"assembling a data packet by the administrative processor in response to the interrupt packet for transmission to the remote processor that packet comprising bits representing the state of the standard real-time clock and bits representing the difference between the least significant bits of the standard real-time clock and the transmitted least significant bits of the remote real-time clock" (Crockett, col. 3, lines 10-17)
- Reading, via the at least one secondary computer, the synchronization message; setting, via the at least one secondary computer, the internal clock of the at least one secondary computer to the communicated time indication upon the occurrence of the next interrupt:

“synchronizing the remote real-time clock with the standard real-time clock in response to the data packet” (Crockett, col. 3, lines 18-19)

However, Crockett does not show the packet switching network is an ATM network and sending a success message when the time has been synchronized correctly. Nonetheless these features are well known in the art and would have been an obvious implementation the system disclosed by Crockett as evidenced by Hashimoto.

In analogous art, Hashimoto discloses a multicast message transmission device and message receiving protocol device for realizing fair message delivery time for multicast message. Hashimoto shows transmitting a response to a message over an ATM network: Hashimoto, Fig. 10 shows a Transmission device sending a message to a receiving device and sending an Acknowledge Response from the receiving device

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of implementing the system of Crockett so as to Crockett, such as taught by Hashimoto, in order to detect and correct time synchronization errors.

In referring to claims 18 and 26, the system of Crockett in view of Hashimoto is silent as to interrupts that are not related to time synchronization, inherently implying further interrupts can occur which are not taken into account in the time synchronization method.

In referring to claims 19 and 27, the system of Crockett in view of Hashimoto synchronizes the clocks of multiple computers. The system resets the time after each interrupt is sent.

In referring to claims 20 and 28, the system of Crockett in view of Hashimoto has a time-out step (Hashimoto, Fig. 26, S2509). A person of ordinary skill in the art would have readily recognized the desirability and advantages of setting the time-out period to be one or two interrupts after the time synchronization message was sent.

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In referring to claims 20 and 28, the system of Crockett in view of Hashimoto has a time-out step (Hashimoto, Fig. 26, S2509). A person of ordinary skill in the art would have readily recognized the desirability and advantages of setting the time-out period to be one or two interrupts after the time synchronization message was sent.

In referring to claims 22 and 30 the system of Crockett in view of Hashimoto describes the synchronization of a main computer with client computers. It would be obvious to a person of ordinary skill in the art that each client computer could have any number of client computers connected to it. In which case the same method of clock synchronization could be used with the client as the main computer and its subordinate computers as the clients.

Claims 21 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett in view of Hashimoto and in further view of Ozawa et al. (U.S. Patent Number 6,023,725, hereinafter "Ozawa"). Although Crockett in view of Hashimoto shows substantial features of the claimed invention, including the system of claims 17 and 25 (see 103 rejection above), Crockett in view of Hashimoto does not show the time interval is 23.5 msec. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Crockett in view of Hashimoto as evidenced by Ozawa.

In analogous art, Ozawa discloses a multiple video server system for transmitting data to a constant bit rate network through a variable bit rate network. Ozawa shows: *"Animation data of MPEG1 or MPEG2 has been stored in the hard disk. The constant bit rate of the CATV network is set to $n1$ ($=1.536$ Mbps) which is used for MPEG1 and to $n2$ ($=6.144$ Mbps) which is used for MPEG2. Now assuming that an amount of data to be transmitted per one time is set to $DL1$ ($=4.512$ kB) in case of MPEG1 and to $DL2$ ($=18.047$ kB) in case of MPEG2 (where, $1\text{ B}=8$ bits), the transmission interval (T) is set to: $T=DL1/n1=DL2/n2=23.5$ msec"* (Ozawa, col. 4, lines 17-25)

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Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of implementing the system of Crockett in view of Hashimoto so as to set the time interval to 23.5 msec, such as taught by Ozawa, in order to synchronize the time on a network transmitting MPEG1 and/or MPEG2 data.

Claims 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett in view of Hashimoto and in further view of Strohmer (U.S. Patent Number 5,579,513, hereinafter "Strohmer"). Although Crockett in view of Hashimoto shows substantial features of the claimed invention, Crockett in view of Hashimoto does not explicitly show the communicated time indication also contains a date. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Crockett in view of Hashimoto as evidenced by Strohmer.

In analogous art, Strohmer discloses a method for monitoring the synchronization of clocks in computer networks. Strohmer shows: *"Each clock module forms a representation of its local time in the form of a time stamp, which contains information regarding time, date, whether it is slaved to a master (F0), which master it is slaved to (CLOCKNR), and if its master is synchronized to HU (F1)."* (Strohmer, col. 1, lines 38-42)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of implementing the system of Crockett in view of Hashimoto so as to include a date in the time information, such as taught by Strohmer, in order to guarantee that the computers to be synchronized are set to the same day.

Claims 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crockett in view of Hashimoto and in further view of Hauber (U.S. Patent Number 5,448,557, hereinafter "Hauber"). Although Crockett in view of Hashimoto shows substantial features of the claimed invention, Crockett in view of Hashimoto does not

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show the ATM bus is an AMX bus. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Crockett in view of Hashimoto as evidenced by Hauber.

In analogous art, Hauber discloses an ATM multiplexer/demultiplexer for use in an ATM switching system. Hauber shows: *"An ATM multiplexer/demultiplexer AMX lies between the central office lines ESL1/ASL1, . . . , ESL32/ASL32 of the subscriber side and the ATM switching network ASN."* (Hauber, col. 3, lines 3-6)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of implementing the system of Crockett in view of Hashimoto so as to use an ATM multiplexer, such as taught by Hauber, in order to yield *"the advantage that all connections running via the ATM switching network pass through the same minimum plurality of just one switching element (per transmission direction) in the ATM multiplexer/demultiplexer, this having a correspondingly beneficial influence on the overall delays."* (Hauber, col. 2, lines 42-47)

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Conclusion

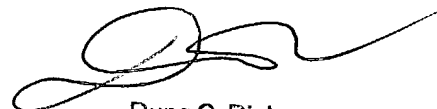
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Klinger whose telephone number is (703) 305-8285. The examiner can normally be reached on M-F 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Scott M. Klinger
Examiner
Art Unit 2153

smk

A handwritten signature in black ink, appearing to read 'Dung C. Dinh', with a long horizontal flourish extending to the right.

Dung C. Dinh
Primary Examiner